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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,554	09/24/2004	Jason R. Ertel	GEMS8081.235	5553

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ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (GEMS)
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EXAMINER

BOOSALIS, FANI POLYZOS

ART UNIT	PAPER NUMBER
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2884

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/711,554	Applicant(s) ERTEL ET AL.	
	Examiner Faye Boosalis	Art Unit 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 17-19, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Yonekawa et al (US 2004/0094732 A1).

Regarding claims 1-2, 17-19, 22, Yonekawa discloses a method of manufacturing a radiographic detector panel support (1) comprising: a body (10) (20) composed of a composite material (i.e. aluminum, carbon fiber reinforced plastic or the like) ([0048]) sufficient to structurally support components of a radiographic detector; radiation absorbing material (25) (i.e. lead sheet) ([0051]); and wherein the radiation absorbing material (25) has a mass sufficient to prevent detection of radiation reflected off a back cover (21) (i.e. backscatter) of the radiographic detector by radiation detecting components of the radiation detector ([0051]).

Regarding claim 3, Yonekawa discloses a thermal layer (gap) secured to the body for absorbing thermal expansion of the back panel (20) ([0058]).

4. Claims 8-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 2002/0181659 A1).

Regarding claims 8-10, Watanabe discloses an x-ray detector system comprising: a scintillator (41) configured to convert radiographic energy to light ([0043] and [0004]); a detector array (44) having a plurality of detector elements to detect light from the scintillator; a control board (47) to control the detector array during data acquisition and data readout (see Fig. 4 and [0043]); and a panel support (43) disposed between detector array and control board (See Fig. 4), the panel support at least partially formed of radiation absorbing material (i.e. metal compound) ([0044]).

Regarding claim 16, Watanabe discloses the system comprising a cover (21) housing the scintillator (41) ([0043] and [0004]) the detector array (44), the control board (47); and the panel support (43) (see Fig. 4 and [0043]), and the cover having a handle to facilitate portability thereof ([0072]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-6, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Yonekawa et al* (US 2004/0094732 A1), as applied to claims 1 and 17 above, and further in view of *Karellas et al* (US 2002/0070365 A1).

Yonekawa et al discloses all of the limitations of the parent claim 1, as described above. However, *Yonekawa et al.* are silent with regards to the absorbing material including tungsten.

Karellas et al. discloses a system for quantitative radiographic imaging, comprising an absorbing material (i.e. film material) can be a metal (i.e. tungsten) ([0208]). Thus, it would have been obvious for one having ordinary skill in the art the time the invention was made to include tungsten as a radiation absorbing material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claims 6 and 21, Yonekawa discloses the composite material can be made of aluminum, carbon fiber reinforced plastic or the like. ([0048]). Although Yonekawa does not specifically disclose the material including graphite, it would have been obvious for one having ordinary skill in the art the time the invention was made to include graphite as the body's composite material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

7. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Yonekawa et al* (US 2004/0094732 A1), as applied to claims 1 and 17 above, and further in view of *Watanabe et al* (US 2002/0181659 A1).

Yonekawa et al discloses all of the limitations of the parent claim 1, as described above. However, Yonekawa et al. are silent with regards to the arrangement of the planar body in regards to the radiographic detector and the control board.

Watanabe discloses an x-ray detector system comprising: the body component of the detector panel is a planar body (43) (i.e. flat top surface) ([0020], [0041] and [0056]) and configured to separate the scintillation components (41) from the control board (47) of electronics of the radiographic detector (See Fig. 4). Thus, it would have been obvious to a person having ordinary skill in the art to modify Yonekawa et al. to use a planar body for the support structure of the detector panel to provide comfort to the subject placed on the detector panel support, as taught by Watanabe et al. ([0056]) and so as to enable indirect detection to determine x-ray attenuation through the imaging subject.

Regarding claim 20, Yonekawa et al discloses all of the limitations of the parent claim 17, as described above. However, Yonekawa et al. are silent with regards to the arrangement within the flat panel x-ray detector and the housing comprising a handle.

Watanabe discloses the step of disposing a glass substrate (43) ([0044]) and detector array (44) on the first layer of non-x-ray absorbing material (21) ([0043]); disposing a layer of scintillation material (41) adjacent the detector array (See Generally Fig. 4); arranging the first layer and the second layer of non-x-ray absorbing material, the x-ray absorbing layer (45), the glass substrate (43) and detector array (44), the layer of scintillation material (41), and a control board (47) in a stacked arrangement (See Fig. 4 and [0043]); and disposing the stack arrangement in a housing (202) having a handle (206) (See Fig. 8 and [0072]). Thus, it would have been obvious to a person having ordinary skill in the art to modify Yonekawa et al. to provide a stacked arrangement in the housing of the detector with a handle, so as to enable ease of use

for the subject to hold the detection panel with regards to the arrangement of the detector, as taught by Watanabe (0073)).

8. Claims 11-12, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 2002/0181659 A1), as applied to claim 8 above, and further in view of Yonekawa et al (US 2004/0094732 A1).

Watanabe et al discloses all of the limitations of the parent claim 8, as described above. However, Watanabe et al. are silent with regards to the absorbing material including tungsten, lead or barium sulfate.

Yonekawa et al discloses a detector panel support (1) comprising: radiation absorbing material, (25) made of lead, ([0051]) wherein the radiation absorbing material (25) has a mass sufficient to prevent detection of radiation reflected off a back cover (21) (i.e. backscatter) of the radiographic detector by radiation detecting components of the radiation detector ([0051]). Thus, it would have been obvious for one having ordinary skill in the art the time the invention was made to include lead as a radiation absorbing material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 12, Watanabe discloses each detector element includes a light sensitive area and an electronics area supported by a glass substrate, and wherein the electronics area includes an electrode switch (i.e. driving circuit) connected to a capacitive element and the control board ([0063]).

Regarding claim 14, Watanabe discloses the panel support is configured to support the glass substrate. Although Watanabe does not disclose specifically the substrate can withstand a point-load of 300 lbs. it would have been inherent since the support, disclosed by Watanabe, comprise the same material composition (made of glass) and should be able to withstand a point-load of 300 lbs. without fragmentation.

Regarding claim 15, although Watanabe does not disclose the scintillator is composed of Cesium iodide, it would have been obvious for one having ordinary skill in the art the time the invention was made to include the material stated supra as a material composite of the scintillator, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 2002/0181659 A1), as applied to claim 12 above, and further in view of *Jeromin et al* (US 5,6641,309 A).

Watanabe et al discloses all of the limitations of the parent claim 12, as described above. However, Watanabe et al. are silent with regards to the use of a thin-film-transistor.

Jeromin et al discloses an x-ray detector system comprising: an electronic switch (32) including a plurality of transistors (5) is disposed on the dielectric substrate layer (12) designed to bias the capacitive element (6) in an energy storage mode (See Generally Fig. 6 and col. 6, lines 23-50). Thus, it would have been obvious to a person having ordinary skill in the art to modify Watanabe et al. to use an electronic switch

Art Unit: 2884

including a TFT so as to control the readout of detector elements in a sequential manner, as taught by Jeromin et al.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Yonekawa et al* (US 2004/0094732 A1), as applied to claim 17 above, and further in view of *Kajiwara et al* (US 6,667,480 B2).

Regarding claim 23, Yonekawa et al discloses all of the limitations of the parent claim 17, as described above. However, Yonekawa et al. are silent with regards to adding a powder form material to the non-x-ray absorbing material.

Kajiwara et al. discloses a radiation image device the step of adding an x-ray absorbing material in powder form to the bulk of the non-x-ray absorbing material (radiation shielding member) of the device (col. 4, lines 48-50). Such a material allows for effective blocking of radiation (col. 4, lines 48-50). Thus, it would have been obvious to a person having ordinary skill in the art to modify Yonekawa et al. to use a powder material on the non-x-ray absorbing material so as to enable effective means for blocking radiation, as taught by Kajiwara et al.

Conclusion


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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